Respiratory Therapists

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Significant Points

- An associate degree has become the general requirement for entry into this field.
- Hospitals will continue to employ the vast majority of respiratory therapists, but a growing number of therapists will work in other settings.
- Job opportunities will be very good, especially for therapists with cardiopulmonary care skills or experience working with newborns and infants.

Nature of the Work

Respiratory therapists and *respiratory therapy technicians*—also known as respiratory care practitioners—evaluate, treat, and care for patients with breathing or other cardiopulmonary disorders. Respiratory therapists, practicing under physician direction, assume primary responsibility for all respiratory care therapeutic treatments and diagnostic procedures, including the supervision of respiratory therapy technicians. Respiratory therapy technicians follow specific, well-defined respiratory care procedures, under the direction of respiratory therapists and physicians. In clinical practice, many of the daily duties of therapists and technicians overlap, although therapists generally have greater responsibility than technicians. For example, respiratory therapists will primarily consult with physicians and other healthcare staff to help develop and modify individual patient care plans. Respiratory therapists are also more likely to provide complex therapy requiring considerable independent judgment, such as caring for patients on life support in hospital intensive care units. In this statement, the term *respiratory therapists* includes both respiratory therapists and respiratory therapy technicians.

To evaluate patients, respiratory therapists interview them, perform limited physical examinations, and conduct diagnostic tests. For example, respiratory therapists test patients' breathing capacity and determine the concentration of oxygen and other gases in patients' blood. They also measure patients' pH, which indicates the acidity or alkalinity level of the blood. To evaluate a patient's lung capacity, respiratory therapists have the patient breathe into an instrument that measures the volume and flow of oxygen during inhalation and exhalation. By comparing the reading with the norm for the patient's age, height, weight, and sex, respiratory therapists can provide information that helps determine whether the patient has any lung deficiencies. To analyze oxygen, carbon dioxide, and pH levels, therapists draw an arterial blood sample, place it in a blood gas analyzer, and relay the results to a physician. Physicians rely on data provided by respiratory therapists to make treatment decisions.

Respiratory therapists treat all types of patients, ranging from premature infants whose lungs are not fully developed to elderly people whose lungs are diseased. Respiratory therapists provide temporary relief to patients with chronic asthma or emphysema, as well as emergency care to patients who are victims of a heart attack, stroke, drowning, or shock.

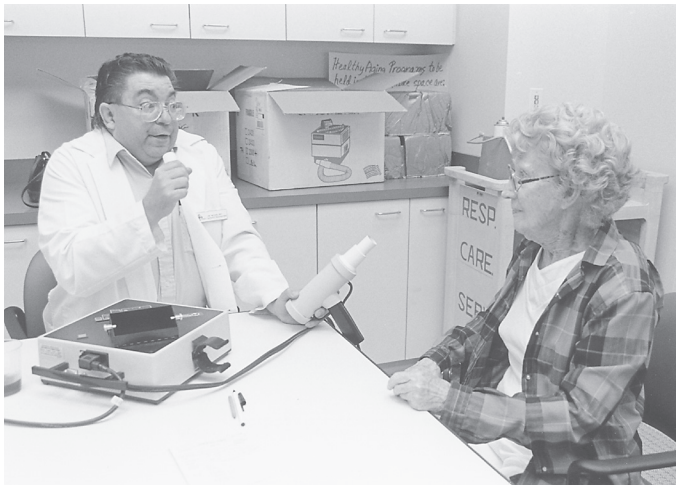
To treat patients, respiratory therapists use oxygen or oxygen mixtures, chest physiotherapy, and aerosol medications. When a patient has difficulty getting enough oxygen into their blood, therapists increase the patient's concentration of oxygen by placing an oxygen mask or nasal cannula on a patient and set the oxygen flow at the level prescribed by a physician. Therapists also connect patients who cannot breathe on their own to ventilators that deliver pressurized oxygen into the lungs. The therapists insert a tube into the patient's trachea, or windpipe; connect the tube to the ventilator; and set the rate, volume, and oxygen concentration of the oxygen mixture entering the patient's lungs.

Therapists perform regular checks on patients and equipment. If the patient appears to be having difficulty, or if the oxygen, carbon dioxide, or pH level of the blood is abnormal, therapists change the ventilator setting according to the doctor's orders or check the equipment for mechanical problems. In home care, therapists teach patients and their families to use ventilators and other life-support systems. In addition, therapists visit patients several times a month to inspect and clean equipment and to ensure its proper use. Therapists also make emergency visits if equipment problems arise.

Respiratory therapists perform chest physiotherapy on patients to remove mucus from their lungs and make it easier for them to breathe. For example, during surgery, anesthesia depresses respiration, so chest physiotherapy may be prescribed to help get the patient's lungs back to normal and to prevent congestion. Chest physiotherapy also helps patients suffering from lung diseases, such as cystic fibrosis, that cause mucus to collect in the lungs. Therapists place patients in positions that help drain mucus, and then they thump and vibrate the patients' rib cages and instruct the patients to cough.

Respiratory therapists also administer aerosols—liquid medications suspended in a gas that forms a mist which is inhaled—and teach patients how to inhale the aerosol properly to ensure its effectiveness.

In some hospitals, therapists perform tasks that fall outside their traditional role. Therapists' tasks are expanding into cardiopulmonary procedures such as taking electrocardiograms and administering stress tests, as well as other areas—for example, drawing blood samples from patients. Therapists also keep records of materials used and charges to patients.



To evaluate patients, respiratory therapists test the capacity of the lungs and analyze their oxygen and carbon dioxide concentrations.

Working Conditions

Respiratory therapists generally work between 35 and 40 hours a week. Because hospitals operate around the clock, therapists may work evenings, nights, or weekends. They spend long periods standing and walking between patients' rooms. In an emergency, therapists work under a great deal of stress. Respiratory therapists employed in home healthcare must travel frequently to the homes of patients.

Respiratory therapists are trained to work with gases stored under pressure that can be hazardous. Adherence to safety precautions and regular maintenance and testing of equipment minimize the risk of injury. As in many other health occupations, respiratory therapists run a risk of catching an infectious disease, but carefully following proper procedures minimizes this risk.

Employment

Respiratory therapists held about 112,000 jobs in 2002. More than 4 out of 5 jobs were in hospital departments of respiratory care, anesthesiology, or pulmonary medicine. Most of the remaining jobs were found in offices of physicians or other health practitioners, consumer goods rental firms that supply respiratory equipment for home use, nursing care facilities, and home healthcare services. Holding a second job is relatively common for respiratory therapists. About 17 percent held another job, compared with 5 percent of workers in all occupations.

Training, Other Qualifications, and Advancement

Formal training is necessary for entry into this field. Training is offered at the postsecondary level by colleges and universities, medical schools, vocational-technical institutes, and the Armed Forces. An associate degree has become the general requirement for entry into this field. Most programs award associate or bachelor's degrees and prepare graduates for jobs as advanced respiratory therapists. Other programs award associate degrees or certificates and lead to jobs as entry-level respiratory therapists. According to the Commission on Accreditation of Allied Health Education Programs (CAAHEP), 59 entry-level and 319 advanced respiratory therapy programs are presently accredited in the United States, including Puerto Rico.

Areas of study in respiratory therapy programs include human anatomy and physiology, pathophysiology, chemistry, physics, microbiology, pharmacology, and mathematics. Other courses deal with therapeutic and diagnostic procedures and tests, equipment, patient assessment, cardiopulmonary resuscitation, application of clinical practice guidelines, patient care outside of hospitals, cardiac and pulmonary rehabilitation, respiratory health promotion and disease prevention, and medical recordkeeping and reimbursement.

More than 40 States license respiratory care personnel. Aspiring respiratory care practitioners should check on licensure requirements with the board of respiratory care examiners for the State in which they plan to work. Also, most employers require respiratory therapists to maintain a cardiopulmonary resuscitation (CPR) certification.

The National Board for Respiratory Care (NBRC) offers voluntary certification and registration to graduates of programs accredited by CAAHEP or the Committee on Accreditation for Respiratory Care (CoARC). Two credentials are awarded to respiratory therapists who satisfy the requirements: Registered Respiratory Therapist (RRT) and Certified Respiratory Therapist (CRT). Graduates from accredited programs in respiratory therapy may take the CRT examination. CRTs who meet education and experience requirements can take two separate examinations leading to the award of the RRT credential. The CRT examination is the standard in the States requiring licensure.

Most employers require applicants for entry-level or generalist positions to hold the CRT or at least be eligible to take the certification examination. Supervisory positions and intensive-care specialties usually require the RRT or RRT eligibility.

Therapists should be sensitive to patients' physical and psychological needs. Respiratory care practitioners must pay attention to detail, follow instructions, and work as part of a team. In addition, operating advanced equipment requires proficiency with computers.

High school students interested in a career in respiratory care should take courses in health, biology, mathematics, chemistry, and physics. Respiratory care involves basic mathematical problem solving and an understanding of chemical and physical principles. For example, respiratory care workers must be able to compute dosages of medication and calculate gas concentrations.

Respiratory therapists advance in clinical practice by moving from general care to care of critical patients who have significant problems in other organ systems, such as the heart or kidneys. Respiratory therapists, especially those with 4-year degrees, may also advance to supervisory or managerial positions in a respiratory therapy department. Respiratory therapists in home healthcare and equipment rental firms may become branch managers. Some respiratory therapists advance by moving into teaching positions.

Job Outlook

Job opportunities are expected to be very good, especially for respiratory therapists with cardiopulmonary care skills or experience working with infants. Employment of respiratory therapists is expected to increase faster than the average for all occupations through the year 2012, because of substantial growth in numbers of the middle-aged and elderly population—a development that will heighten the incidence of cardiopulmonary disease.

Older Americans suffer most from respiratory ailments and cardiopulmonary diseases such as pneumonia, chronic bronchitis, emphysema, and heart disease. As their numbers increase, the need for respiratory therapists will increase as well. In addition, advances in treating victims of heart attacks, accident victims, and premature infants (many of whom are dependent on a ventilator during part of their treatment) will increase the demand for the services of respiratory care practitioners.

Although hospitals will continue to employ the vast majority of therapists, a growing number can expect to work outside of hospitals in home healthcare services, offices of physicians or other health practitioners, or consumer goods rental firms.

Earnings

Median annual earnings of respiratory therapists were $40,220 in 2002. The middle 50 percent earned between $34,430 and $46,130. The lowest 10 percent earned less than $30,270, and the highest 10 percent earned more than $54,030. In general medical and surgical hospitals, median annual earnings of respiratory therapists were $40,390 in 2002.

Median annual earnings of respiratory therapy technicians were $34,130 in 2002. The middle 50 percent earned between $28,460 and $41,140. The lowest 10 percent earned less than

$23,230, and the highest 10 percent earned more than $47,800. Median annual earnings of respiratory therapy technicians employed in general medical and surgical hospitals were $34,210 in 2002.

Related Occupations

Under the supervision of a physician, respiratory therapists administer respiratory care and life support to patients with heart and lung difficulties. Other workers who care for, treat, or train people to improve their physical condition include registered nurses, occupational therapists, physical therapists, and radiation therapists.

Sources of Additional Information

Information concerning a career in respiratory care is available from:

➤ American Association for Respiratory Care, 9425 N. MacArthur Blvd., Suite 100, Irving, TX 75063-4706. Internet: **http://www.aarc.org**

For a list of accredited educational programs for respiratory care practitioners, contact:

➤ Commission on Accreditation for Allied Health Education Programs, 39 East Wacker Dr., Chicago, IL 60601. Internet: **http://www.caahep.org**

➤ Committee on Accreditation for Respiratory Care, 1248 Harwood Rd., Bedford, TX 76021-4244.

Information on gaining credentials in respiratory care and a list of State licensing agencies can be obtained from:

➤ National Board for Respiratory Care, Inc., 8310 Nieman Rd., Lenexa, KS 66214-1579. Internet: **http://www.nbrc.org**